

**AMENDMENTS TO THE CLAIMS WITH MARKINGS TO SHOW CHANGES
MADE, AND LISTING OF ALL CLAIMS WITH PROPER IDENTIFIERS**

Claims 1-12 (Cancelled)

13. (Currently amended) A greenhouse, comprising:

- a plurality of frame elements forming a frame of the greenhouse,
- a plurality of pillows having at least one upper translucent surface facing a radiation source, each pillow supported in a respective frame element,
- a fluid element having a fluid circulating therethrough and a lens system arranged inside the each pillow and formed so as to direct only a portion of the radiation that strikes the upper translucent surface in a direction perpendicular to the upper translucent surface onto the fluid element, and
- a thermodynamic machine extracting thermal energy from the fluid for producing at least electrical power.

14. (Previously presented) The greenhouse of claim 13, and further comprising a heat reservoir for storing a portion of the thermal energy that is not extracted by the thermodynamic machine.

Claims 15-21 (Cancelled)

22. (New) A modular greenhouse comprising:

- a plurality of modular optical elements, each optical element including first and second highly transparent cover sheets supported by a mechanically stable frame thereby forming a pillow, with a plurality of pillows forming an envelope for the greenhouse,
- an optical lens system,
- an energy collection and converting system arranged in each said optical element for collecting light and converting light into energy.

23. (New) The greenhouse of claim 22, wherein the pillows are inflated.

24. (New) The greenhouse of claim 23, wherein the optical lens system inside each pillow, or the pillow itself is adapted for tracking a movement of the sun so that radiation from the sun can strike a surface of an upper pillow cover sheet substantially normal to the surface, and wherein the lens system in each of the pillows is oriented in such a way as to realize a concentration of direct radiation into a focal area of the light collection and converting system.

25. (New) The greenhouse of claim 24, wherein hot fluid is produced through solar radiation by the lens system and supplied to a thermodynamic machine, via a first line while cooled fluid is returned to the lens system via a second line.

26. (New) The greenhouse of claim 25, wherein a heat reservoir is connected between the lens system and the thermodynamic machine for providing around the clock power.
27. (New) A modular optical element comprising: two highly transparent sheets supported along their circumference by a mechanically stable frame and forming a pillow, the said pillow including an optical lens system and light collection and conversion system arranged within the pillow, and wherein the pillow is inflatable with compressed air.
28. (New) The optical element of claim 27, wherein pluralities of the said optical elements are assembled to form an enveloping structure of a greenhouse.
29. (New) The greenhouse of claim 13, wherein the translucent surfaces are each an element selected from the group consisting of a Fresnel lens, a holographic lens and a refractive optical element.
30. (New) The greenhouse of claim 28, wherein the light collection and conversion system includes a solar cell or a photovoltaic collector.
31. (New) The greenhouse of claim 24, wherein the solar cell is located in the focal area of the light collection and converting system.

32. (New) The greenhouse of claim 27, wherein the pillow is made from environmentally stable fluoropolymer sheets.